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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,620	07/03/2003	David C. Fairbourn	MTCL / 09	4378
26875	7590	04/17/2006	EXAMINER	
WOOD, HERRON & EVANS, LLP 2700 CAREW TOWER 441 VINE STREET CINCINNATI, OH 45202			FULLER, ERIC B	
			ART UNIT	PAPER NUMBER
			1762	

DATE MAILED: 04/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/613,620

Applicant(s)

FAIRBOURN, DAVID C.

Examiner

Eric B. Fuller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-37 and 44-57 is/are pending in the application.
4a) Of the above claim(s) 32 and 33 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 24-31, 34-37 and 44-57 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant has added the word “passively” before the phrase “providing a first vapor” and argues that the prior art actively feeds the gas. Applicant alleges that this is a patentable difference. The examiner disagrees.

First, passively providing the vapor does not make sense. The applicant must have provided some sort of active step in providing the gas, if not the invention is an act of nature and cannot be patentable. The degree of activity that differentiates between “passively” or “actively” is not defined by the specification. Thus, the distinction is not understood and the introduction of the term makes the scopes of the claims unclear and does not differentiate the claims from the prior art. Accordingly, the 35 U.S.C. 102 rejection of the previous Office Action has been maintained.

Secondly, even if there were a distinction between “passively” and “aggressively” providing the gas, the object of the invention is to have the gas be fed into the reaction chamber. As long as the gas reaches the reaction chamber, the means by which the gas reaches the chamber would have been obvious variations of each other, as it does materially affect the process or the resulting product. Accordingly, a 35 U.S.C. 103 rejection has been added to the record in order to account for this minor, undistinguishable, difference the applicant has added by amendment.

With respect to the arguments based on “without a carrier gas”, it is noted that the prior art only uses the carrier gas in the tubes in which the first reactant does not

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combine with the second reactant. The tubes in which the reactant does combine with second reactant do not require a carrier gas. This reads on "without a carrier gas" and seems to read on "passively providing", if that is what the applicant means by this term.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 24-31 and 44-57 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The specification does not provide a distinction between passively and actively providing the vapor.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 24-31 and 44-57 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The scopes of the claims are vague and confusing because of the specification does not provide a distinction between passively and actively providing the vapor.

Claim Rejections - 35 USC § 102/103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 24-31, 34-37, 44-57 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nagaraj et al. (US 6,602,356 B1).

Nagaraj teaches a process where an aluminum chloride vapor is created outside of the reaction chamber and flowed over hafnium chloride as it passes into the chamber, creating a mixture of vaporous aluminum chloride and hafnium chloride in the reaction space (column 3, lines 1-16). The superalloy jet engine substrate (column 4, lines 35-50; abstract) is heated (column 6, lines 18-40) in the presence of the gases in order to form a platinum aluminide coating with reactive hafnium (column 25-45). This process reads on the applicant's claims. Additional limitations of the dependent claims are taught in the examples. Since the first reactant that mixes with the second reactant does not require a carrier gas (only the gas that is not flowed over the chips requires a carrier gas), this reads on "without a carrier gas" and appears to read on "passively providing". If applicant wishes to argue that it does not read on "passively providing", then the examiner relies on the fact that the applicant has not provided a clear

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distinction between “passively” and “actively”. Accordingly, using either method would have been obvious at the time the invention was made to a person having ordinary skill in the art.

For claims 24-31, the first gas is aluminum chloride and the second gas is hafnium chloride. However, for other claims, originating from separate independent claims, to be read upon, the first and second gases are switched.

As to claims 27, 49, and 56, aluminum chloride is a solid at room temperature. It must inherently be either hydrated or anhydrous.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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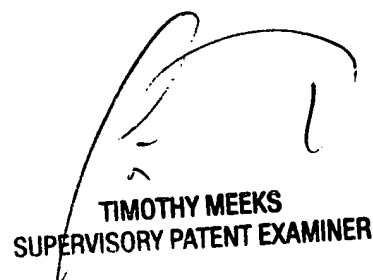
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B. Fuller whose telephone number is (571) 272-1420. The examiner can normally be reached on Mondays through Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Meeks, can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



EBF



TIMOTHY MEEKS
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